AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (original) An optical terminator for absorbing high power optical energy traveling in a fiber or waveguide, comprising:

a scattering core that receives the high power optical energy and radiates the scattered optical energy;

an absorbing layer at least partially surrounding the scattering core to absorb high power optical energy scattered and radiated by the scattering core; and

a thermal barrier between the scattering core and the surrounding absorbing layer.

2. (original) The optical terminator of claim 1 further including a heat sink for the absorbing layer.

3. (original) The optical terminator of claim 1 wherein the thermal barrier is an air barrier.

4. (original) The optical terminator of claim 1 wherein the absorbing layer absorbs optical energy of a broad spectrum of wavelengths.

5. (original) The optical terminator of claim 1 as presented in a connector configuration.

6. (original) The optical terminator of claim 1 as presented in a plug configuration.

7. (original) The optical terminator of claim 1 as presented in a bare fiber, in line connection configuration.

8. (original) The optical terminator of claim 1 as presented in a waveguide, in line connection configuration.

9. (original) The optical terminator of claim 1 as presented in an in line configuration with an angled splice connection.

10. (original) The optical terminator of claim 1 wherein the scattering core comprises a fiber fuse-type core.

11. (original) The optical terminator of claim 1 wherein the scattering core comprises a filled capillary-type core.

12. (original) The optical terminator of claim 1 wherein the scattering core comprises an enlarged-type core.

13. (original) The optical terminator of claim 1 as presented in an in line configuration with a tapered splice connection.

14. (original) The optical terminator of claim 1 wherein the scattering core comprises an enlarged-type core having an angled end.

15. (original) The optical terminator of claim 14 as presented in an in line configuration with an angled splice connection to the enlarged-type core.

16. (original) The optical terminator of claim 1 wherein the scattering core comprises an enlarged-type core with a conical shape.

17. (original) The optical terminator of claim 16 wherein the enlarged-type core with the conical shape is an extended fiber.

18. (original) The optical terminator of claim 1 wherein the absorbing layer includes an angled absorbing face.

19. (original) The optical terminator of claim 1 further including an axial distance adjustment mechanism for selectively choosing an axial distance relationship between the scattering core and the absorbing layer.

20. (original) A method for producing a scattering core, comprising:

emitting high-energy laser light into a large core fiber/waveguide;

flowing the emitted light into a narrowed fiber/waveguide to increase its power per unit area to a level above a fiber fuse threshold; and

impinging the increased power, emitted light on a contaminating deposition which initiates a fiber fuse backward effect along the narrowed fiber/waveguide to damage the narrowed fiber/waveguide through the production of bubbles along a core of the narrowed fiber/waveguide.

21. (number not used)

21. (original) The method of claim 20 wherein the foregoing steps are performed in situ with respect to the assembly of an optical terminator device.

22. (original) The method of claim 20 wherein the foregoing steps are performed as an external production method to assembly of an optical terminator device

23. (original) A method for producing a scattering core, comprising:

emitting high-energy laser light into a fiber/waveguide at a power per unit area level above a fiber fuse threshold;

impinging the emitted light on a contaminating deposition which initiates a fiber fuse backward effect along the fiber/waveguide to damage the narrowed fiber/waveguide through the production of bubbles along a core of the fiber/waveguide; and

reverse splitting energy from the fiber/waveguide to terminate the fiber fuse backward effect.

24. (previously presented) The method of claim 23 wherein the foregoing steps are performed in situ with respect to the assembly of an optical terminator device.

25. (previously presented) The method of claim 23 wherein the foregoing steps are performed as an external production method to assembly of an optical terminator device.

26. (original) A method for producing a scattering core, comprising:

drawing a liquid, which shrinks in volume when solidified, into a capillary to substantially fill its inner volume; and

solidifying the liquid within the capillary to produce bubbles along the inner volume due to shrinkage in volume.

27. (previously presented) The method of claim 26 wherein the foregoing steps are performed in situ with respect to the assembly of an optical terminator device.

28. (previously presented) The method of claim 26 wherein the foregoing steps are performed as an external production method to assembly of an optical terminator device.

29. (previously presented) The method of claim 26 wherein the liquid is glass in liquid form at room temperature, and solidifying comprises heating the liquid within the capillary.

30. (previously presented) The method of claim 26 wherein the liquid is a polymer primer that when solidified within the capillary releases adsorbed gases to create the bubbles.

31. (original) An optical terminator, comprising:

a heat sink cap having an internal surface;

an optical absorbing layer on the internal surface of the heat sink cap;

a fiber having a scattering core and a transparent cladding, the fiber being positioned within the heat sink cap such that a thermal barrier is maintained between the optical absorbing layer and the cladding of the fiber.

32. (previously presented) The optical terminator of claim 31 further including an axial distance adjustment mechanism for selectively choosing an axial distance relationship between the fiber and the optical absorbing layer.

33. (previously presented) The optical terminator of claim 31 wherein the fiber includes a splice for in line connection to another fiber.

34. (previously presented) The optical terminator of claim 33 wherein the splice is an angled splice.

35. (previously presented) The optical terminator of claim 33 wherein the splice is positioned within the heat sink cap.

36. (previously presented) The optical terminator of claim 33 wherein the splice includes a funnel region.

37. (previously presented) The optical terminator of claim 31 wherein the optical absorbing layer on a surface of the heat sink cap adjacent an end of the fiber is angled.

38. (previously presented) The optical terminator of claim 31 wherein the fiber within the heat sink cap has a conical shape.

39. (original) An optical terminator, comprising:
a heat sink cap having an internal surface;
an optical absorbing layer on the internal surface of the heat sink cap;
an enlarged scattering core positioned within the heat sink cap such that a thermal barrier is maintained between the optical absorbing layer and the enlarged scattering core.

40. (previously presented) The optical terminator of claim 39 further including an axial distance adjustment mechanism for selectively choosing an axial distance relationship between the enlarged scattering core and the optical absorbing layer.

41. (previously presented) The optical terminator of claim 39 wherein the enlarged scattering core includes a splice for in line connection to a fiber.

42. (previously presented) The optical terminator of claim 41 wherein the splice is an angled splice.

43. (previously presented) The optical terminator of claim 41 wherein the splice is positioned within the heat sink cap.

44. (previously presented) The optical terminator of claim 39 wherein the enlarged scattering core includes an end adjacent to the heat sink cap which is angled.

45. (previously presented) The optical terminator of claim 39 wherein the optical absorbing layer on a surface of the heat sink cap adjacent an end of the enlarged scattering core is angled.

46. (previously presented) The optical terminator of claim 39 wherein the enlarged scattering core within the heat sink cap has a conical shape.

47. (previously presented) The optical terminator of claim 39 wherein the enlarged scattering core is made of Silica.

48. (previously presented) The optical terminator of claim 39 wherein only a portion of the enlarged scattering core is positioned within the heat sink cap.

49. (original) An optical terminator, comprising:

a heat sink cap having an internal surface;

an optical absorbing layer on the internal surface of the heat sink cap;

a waveguide including a scattering core positioned within the heat sink cap such that a thermal barrier is maintained between the optical absorbing layer and the scattering core of the waveguide.

50. (previously presented) The optical terminator of claim 39 wherein the scattering core includes a splice for in line connection to another waveguide.